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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/647,963
Filing Date: August 26, 2003
Appellant(s): LUND, MARTIN

Philip Henry Sheridan
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 10/27/2010 appealing from the Office action mailed May 11, 2010.

(1) Real Party in Interest

The examiner has no comment on the statement, or lack of statement, identifying by name the real party in interest in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The following is a list of claims that are rejected and pending in the application:

Claims 1-15.

(4) Status of Amendments After Final

The examiner has no comment on the appellant's statement of the status of amendments after final rejection contained in the brief.

(5) Summary of Claimed Subject Matter

The examiner has no comment on the summary of claimed subject matter contained in the brief.

(6) Grounds of Rejection to be Reviewed on Appeal

The examiner has no comment on the appellant's statement of the grounds of rejection to be reviewed on appeal. Every ground of rejection set forth in the Office action from which the appeal is taken (as modified by any advisory actions) is being maintained by the examiner except for the grounds of

rejection (if any) listed under the subheading "WITHDRAWN REJECTIONS." New grounds of rejection (if any) are provided under the subheading "NEW GROUNDS OF REJECTION."

(7) Claims Appendix

The examiner has no comment on the copy of the appealed claims contained in the Appendix to the appellant's brief.

(8) Evidence Relied Upon

20020188718	McGraw	10-2002

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

Claims 1-15 are rejected under 35 U.S.C. 102(e) as being anticipated by McGraw et al (US Publication. 20020188718), hereinafter "McGraw"

As per claims 1 and 5, McGraw teaches a method and machine readable storage for communicating information in a server platform (see fig. 1 and 7), the method comprising:

receiving at least one packet from at least one of a first switch blade associated with a first multiserver platform (Fig. 1 and fig. 7; 0128-00131);

determining at least a server blade associated with a second multiserver platform for receiving at least a portion of said received at least one packet (see fig. 7; ¶ 0138-00144; 0159-161); and

routing said at least a portion of said at least one received packet to at least said server blade (¶ 0138-00144; 0159-161).

As per claims 2 and 6, McGraw teaches the invention, wherein said receiving further comprises receiving said at least one packet by at least one of a second switch blade associated with a third multiserver platform and a central switch (¶ 0138-00144; 0159-161).

As per claims 3 and 7, McGraw teaches the invention, further comprising if said at least one packet is received by said central switch, communicating said at least a portion of said at least one received packet to at least said second switch blade via at least one communication link that couples said central switch directly to said at least said second switch blade (see fig. 7; ¶ 0138-00144; 0159-161).

As per claim 4, McGraw teaches the method according to claim 1, further comprising processing said routed at least a portion of said at least one received packet by said at least said second blade server (¶ 0138-00144; 0159-161).

As per claim 8, McGraw teaches the machine-readable storage according to claim 5, further comprising code for processing said routed at least a portion of said at least one received packet by said at least said second blade server (¶ 0138-00144; 0159-161).

As per claims 9 and 10, McGraw teaches a system for communicating information in a server platform, the system comprising: a first multiserver platform comprising at least one of a network interface and a first switch blade (see fig. 1 and fig. 7 ¶ 0138-00144); and

at least a second multiserver platform comprising a second switch blade coupled said first switch blade of said first multiserver platform (see fig. 1 and fig. 7; ¶ 0138-00144; 0159-161).

As per claim 11, McGraw teaches the system according to claim 10, wherein said first multiserver platform, said second multiserver platform and said third multiserver are coupled in a daisy-chain configuration (see fig. 7).

As per claim 12, McGraw teaches according to claim 10, wherein said first multiserver platform, and said third multiserver platform communicate via said second multiserver platform (see fig. 1 and fig. 7; ¶ 0138-00144; 0159-0161).

As per claim 13, McGraw teaches the system according to claim 9, further comprising at least one central switch coupled to at least said first switch blade of said first multiserver platform and said second switch blade of said second multiserver platform (see fig. 1 and fig. 7; ¶ 0138-00144; 0159-0161).

As per claim 14, McGraw teaches the system according to claim 13, further comprising at least a third switch blade of a third multiserver platform coupled to said at least one central switch (see fig. 1 and fig. 7; ¶ 0138-00144; 0159-0161).

As per claim 15, McGraw teaches the system according to claim 14, wherein said first multiserver platform, said second multiserver platform and said third multiserver platform communicate via said central switch (see fig. 1 and fig. 7; ¶ 0138-00144; 0159-0161).

(10) Response to Argument

Argument A

Starting with claims 1 and 5, the Appellant argues "that McGraw does not disclose or suggest at least the limitations of "receiving at least one packet

from at least a first switch blade associated with a first multiserver platform," "determining at least a server blade associated with a second multiserver platform for receiving at least a portion of said received at least one packet," and "routing said at least a portion of said at least one received packet to at least said server blade,"" (page 9 and page 11 last paragraph).

Particularly, the Appellant argues McGraw fails "to show a **multiserver platform** and **a first switch blade**, ... as set forth in Appellant's independent claims 1 and 5." (First paragraph pages 11 and 12).

The Examiner notes that McGraw teaches "In another embodiment, **multiple server chassis** may be provided, **each having** multiple **server processing cards** associated therewith. **Multiple server chassis** may be coupled using a communication bus, such as communication bus 31. The coupling **between multiple server chassis** may be accomplished by coupling the communication bus with network interface cards in **each attached server chassis**. In a particular embodiment, the communication bus may comprise an RS-485 bus." (0062). See also figure 7.

McGraw also teaches "In the configuration phase, console server 50 determines the number of active **computing devices 32-35 in its chassis**, and determines the number of active chassis in **its neighborhood**. The

neighborhood of a particular chassis includes all **other chassis which include computing devices** under the monitoring or control of the console server" [0133]. In other words McGraw teaches multiple server chassis (first multiserver platforms, second multiserver platform third multiserver platform etc) each including computing devices 32-35 (server blades) that communicate with each via link card/board (figure 7). **See** paragraphs 0140 and 0152 where the computing devices are considered as **server blades** "During the operation phase, communication between computing devices (e.g**. server blades**) within a chassis is accomplished as follows." (0140).

Regarding Appellant's argument of "determining at least a server blade associated with a second multiserver platform for receiving at least a portion of said received at least one packet," and "routing said at least a portion of said at least one received packet to at least said server blade," (page 11 last paragraph).

The Examiner notes that McGraw teaches [0138] In accordance with a particular embodiment of the present invention, **computing devices (e.g. Slave blades) in neighboring chassis** are detected using an embedded microprocessor based, inter-chassis communication board. On detecting an Inter-chassis Link Board on its chassis, **the console server sends the Identify_Interchassis** command on the local RS-485 bus. After sending this command, the console server waits for a response. The Link Board is the only

card that acts on this command. On sensing the Identify_Interchassis command on the local RS-485 bus, **the Link Board forwards the request to the inter-chassis RS-485 bus along the out_port** and appends a <Data> field to the command...The subsequent **Inter-chassis Link board that receives** this command in turn **forwards it further** on but prior to that it increments the <number-of-chassis> field and appends its chassis ID to <chassis ID> field. As this messages cycles through the chassis, it **finally reaches the Inter-chassis Link board on the chassis with console server**. The Link Board in this Chassis then forwards the aggregated response to the console server over the local RS-485 bus." [0138].

McGraw also teaches "[0142] "Whenever the console server **determines a Server Blade** has console data and wants to get it from a Slave Blade, it sends a "Transit<**Slot-Identifier**>" command on the RS-485 bus and listens for a response. **The Slave Blade, whose slot number matches the Slot-Identifier**, on receiving this Transmit command starts to reply... **The Slot-Identifier indicates the slot number of the Slave Blade** (0142).

"**If the console server has Console data that it needs to send to the Server Blade**, it sends a "Receive <Slot-Identifier><Data." command on the RS-485 bus and listens for an acknowledgement. The Slave Blade on successfully receiving all the bytes sent by the console server sends the "Acknowledge" message with Error bit cleared. If, on the other hand, the Slave Blade did not

receive the bytes successfully, it sends the "Acknowledge" message with the Error bit set. The console server on receiving this message resends the entire data." (0143).

"In accordance with a particular embodiment of the present invention, **Server Blades in Slot 1 and Slot 2**, and **the Inter-chassis communication Board, or link board**, are capable of assuming the backup console functionality." [0152].

Thus McGraw clearly teaches determining chassis ID in a message and forwarding the message to right chassis based on the inter-chassis id via an Inter-chassis Link board that forwards the data (message) to another Inter-chassis Link board. McGraw also teaches sending data to a particular server blade based on Slot-Identifier whose slot number matches the Slot-Identifier of the server blade. Therefore, Appellant's argument of "determining at least a server blade associated with a second multiserver platform for receiving at least a portion of said received at least one packet," and "routing said at least a portion of said at least one received packet to at least said server blade," is not persuasive and as of claims 1 and 5 are not allowable.

The Appellant also argues that "it appears the Office Action is alleging that McGraw's link card/board is a switch blade; however, nowhere in McGraw is

there any disclosure regarding McGraw's link card/board performing any switching functions. In fact, nowhere in McGraw do the terms "switch" and "switching" appear in McGraw. Rather, McGraw describes its link card/board as network interface card. One of ordinary skill in the art would readily understand that the disclosure of a network interface card is different than Appellant's claimed switch blade. For example, as described in McGraw's Paragraph [0144], McGraw's link card/board merely pass messages between inter-chassis RS-485 bus and local RS-485 bus. In other words, McGraw's link card/board is merely an interface between inter-chassis and local buses, which is different than a switch blade." (Pages 10 and 13).

The Examiner respectfully disagrees Appellant's description of McGraw's link card/board as network interface card (only) (page 10 line 12) or "McGraw's link card/board is merely an interface between inter-chassis and local buses, which is different than a switch blade" (page 10 lines 16-18).

The Examiner notes "Office personnel are to give claims their broadest reasonable interpretation in light of the supporting disclosure. In re Morris, 127 F.3d 1048, 1054-55, 44 USPQ2d 1023, 1027-28 (Fed. Cir. 1997).

The Examiner notes that McGraw clearly identifies the link card/board as "**The link card in a chassis** is **the computing device** which communicates with **link cards** and/or **computing devices** of **other chassis** to collect

information from **computing devices within other chassis**." (0128). McGraw also refers "**The link card** entity is **a bridge** between **multiple chassis** and is involved in **proxy of commands** on behalf of console server 50. This enables console server 50 to provide integrated console services across multiple chassis." (0128). Furthermore, "**the Link Board forwards the request to the inter-chassis RS-485** bus along the out_port and appends a <Data> field to the command. ...The subsequent Inter-chassis Link board that receives this command in turn forwards it further on ... As this messages cycles through the chassis, it finally reaches the Inter-chassis Link board on the chassis with console server. The Link Board in this Chassis then forwards the aggregated response to the console server over the local RS-485 bus." (0138). Therefore, the link card/board of McGraw is a computing device that acts as bridge between multiple chassis as described above and in figure 7. It also performs switching functions such as forwarding messages from one chassis to another as shown in inter-chassis embodiment of figure 7 and paragraphs 0128 and 0138.

Applicant's specification states "The switch blade 140 may be part of the backplane 130. In this regard, the switch blade 140 may be integrated within the backplane 130 or it may be a plug-in card that may be plugged into the backplane 130." [0029]. The specification also states that "Furthermore, the

backplane 130 and/or the switch blades 140 may provide connectivity between the one or more of the blade servers 120 and the network 170." [0031].
In paragraph 40, Appellant's specification also states "The bus controller 418 and/or the switch blade 408 may also provide **a switching function** that may permit messages to be transferred among the blade servers 406 via the switch blade and from an external source such as the network 170 (FIG. 1) to any one or more of the blade servers 406..."

Therefore, McGraw's link card/board is similar in hardware (plug-in card) and function (provide connectivity between blade server and a network or permitting message to be transferred among computing devices (blade server) as described above and (figure 7 and paragraphs 0128-0131 and 0138). As such in light of the Appellant's disclosure McGraw's Link card/board meets the broadest reasonable interpretation of switch blade and/or switch. As a matter of fact, McGraw's definition of the link card/board as a computing device and bridge between multiple chassis which involves in proxy of commands on behalf of console server and forwarding message to devices in other chassis is in conformity with Appellant's invention as described in the specification and claimed by the Appellant.

Regarding 9, the Appellant also argues "The Appellant submits that McGraw does not disclose or suggest at least the limitations of "a first multiserver

platform comprising a network interface and a first switch blade," and "at least a second multiserver platform comprising a second switch blade coupled to said first switch blade of said first multiserver platform," (Page 7 and 8).

The Examiner disagrees. The Examiner notes that McGraw teaches a first multiserver platform (first chassis (top) figure 7) comprising a network interface (interface connecting between the link card and the server platform (top chassis) and first switch blade (first (top) link card/board) figure 7 and "at least a second multiserver platform (middle chassis figure 7) comprising a second switch blade (middle link card/board) coupled to said first switch blade (first (top) link card/board) of said first multiserver platform (first chassis (top) figure 7). The Examiner notes McGraw teaches in paragraph (0062] "In another embodiment, **multiple server chassis** may be provided, **each having multiple server processing cards associated** therewith. Multiple server chassis may be **coupled using a communication bus**, such as communication bus 31. The coupling between multiple server chassis may be accomplished by **coupling the communication bus with network interface cards in each attached server chassis.** In a particular embodiment, the communication bus may comprise an RS-485 bus." In other words looking at figure 7 there is RS-485 bus that is between the link card and blade servers where top blades connect to the RS-485 via network interface. It is also noted the network interface or the connection of the blades to the RS-485 is separate than the

link card/board as shown in figure 7. Therefore, Appellant's arguments regarding claim 9 is not persuasive.

In response to Appellant's argument that "McGraw's mere disclosure of its link card/board cannot teach both a network interface and a first switch blade" (page 8 second paragraph), the Examiner notes that McGraw similarly teaches network interface that connects the device/server cards to the bus 31 and a separate link card/board that is also connected to the bus 31 as explained above.

In response to Appellant that "... nowhere in McGraw is there any disclosure regarding McGraw's link card/board performing any switching functions. In fact, nowhere in McGraw do the terms "switch" and "switching" appear in McGraw." (Page 8 last paragraph). The Examiner refers the Appellant to above response for the same argument in claims 1 and 5 where the Examiner indicated how the McGraw's Link card/board functions as switch in light of the Appellant specification and in light of normal switching functions such as bridging between server platforms (chassis) and forwarding message (packets) from one chassis to another based on Chassis ID and slot ID (destination server card).

Argument B

In essence the Appellant argues "Nowhere in McGraw is there any disclosure that McGraw's link card/board provides any switching functions whatsoever. In fact, the terms "switch" and "switching" do not even appear in McGraw."

The Examiner has addressed this argument in the above paragraphs and maintains that McGraw's Link card/board provides switching functionality that conforms to the Appellant's invention as described in the specification. Particularly McGraw identifies the link card/board as "**The link card in a chassis** is **the computing device** which communicates with **link cards** and/or **computing devices** of **other chassis** to collect information from **computing devices within other chassis**." (0128). McGraw also refers "**The link card** entity is **a bridge** between **multiple chassis** and is involved in **proxy of commands** on behalf of console server 50. This enables console server 50 to provide integrated console services across multiple chassis." (0128). Furthermore, "**the Link Board forwards the request to the inter-chassis RS-485** bus along the out_port and appends a <Data> field to the command. ...The subsequent Inter-chassis Link board that receives this command in turn **forwards it further on** ...." (0138). Therefore, the link card/board of McGraw is a computing device that acts as bridge between multiple chassis as described above and in figure 7. It also performs switching

functions such as forwarding messages from one chassis to another as shown in inter-chassis embodiment of figure 7 and paragraphs 0128 and 0138.

Argument C

The Appellant argues "... nowhere in McGraw is there any disclosure regarding any switch blades or **switching functions**. Further, even if McGraw's link cards/boards could be considered switch blades (which they clearly are not), the Appellant notes that nowhere in McGraw is there any disclosure regarding **a central switch**. Specifically, as discussed in the Appellant's Specification, a central switch **is not part of any** multiserver platform." (Page 15).

Applicant's foot note (42) indicates page 16, lines 6-14 which reads "In operation, the central switch may coordinate the high speed switching or routing of packets among the various multiserver platforms 604, 605, ..., 606. One advantage of the central switch configuration of FIG. 6 over the daisy-chain configuration of FIG. 3 is that, in the central switch configuration of FIG. 6, a packet may be transmitted from any given multiserver platform 604, 605, ..., 606, through the central switch 603, to any other multiserver platform. In the daisy-chain configuration or arrangement, a packet of data may have to be passed through a plurality of intermediate multiserver platforms in order to be transferred to from a source platform to a destination platform."

In the above citation there is no mention of "central switch **is not part of any** multiserver platform" as argued by the Appellant. It simply says the central switch couples between multiple platforms via another switch blade. See page 18 lines 15-19 of the Appellant's specification "In another embodiment of the invention, for example, at least one central switch 603 (FIG. 6) may be coupled to the first switch blade 607 of the first multiserver platform 604 and the second switch blade 608 of the second multiserver platform 605. At least a third switch blade 609 of a third multiserver platform 606 may also be coupled to the central switch 603."

Firstly, the Examiner has addressed how McGraw's link card/board meets Appellant's claimed switch blade. Secondly, the Examiner notes that McGraw's midle link card/board (switch) interconnectes between between the above chassis (first platform) with the lower chassis (third platform) via other link boards as shown in figure 7. Thus McGraw meets Appellant's claimed central switch. It is also noted that claim 2 and 6 recite " wherein said receiving further comprises receiving said at least one packet by at least a second switch blade **associated** with a third multiserver platform and **a central switch**", while claims 3 and 7 recite "The method according to claim 2, further comprising if said at least one packet is received by said central switch, communicating said at least a portion of said at least one received packet to at least **a third switch blade** associated with said second multiserver platform via

at least one communication link that **couples said central switch** directly to said at least said **third switch blade**." The central switch as claimed in claim 2 and 6 appears to be in associatiation with (a second switch blade associated with a third multiserver platform). In claim 3 and 7, the central swtich communicates a received packet to a third switch blade associated with multiserver platform via a communication link directly attached to a central switch. These claim limitations appear exactly what McGraw's midle link card/board shows. It connects to the third platform (lower chassis) via third link card/board through RS-485 communication link and the top chassis via top link card (switch). Therefore, Appellant's arguments regarding dependent claims 2 6, 3 and 7, as claimed is not persuasive because McGraw's central switch (link card/board) acts the same.

Regarding calim 13, the Appellant argues that McGraw fails to teach "at least one central switch coupled to at least said first switch blade of said first multiserver platform and said second switch blade, of said second multiserver platform" (page 17).

The Examiner notes as explained above McGraw show in figure 7 a cetnral switch (midle link card/board coupled to a first switch blade (above link card/board) of first chassis (multiserver platform) and second switch blade

(bottom Link card/board) associated to the bottom chassis (second multiserver platform).

Similarly regarding calim 14, the Appellant argues that McGraw fails to teach, "at least a third switch blade of a third multiserver plattorm couplea to said at least one central switch" (page 18).

McGraw teaches cetral switch (midle link card/board) coupled to a third switch blade (botom link card/board) of third chassis (multiserver platform) see figure 7. Thus, Appellant's argument regarding dependent claims 13 and 14 are also not persuasive.

Regarding calim 15, the Appellant argues that "McGraw at least fails to teach, for example, "wherein said first multiserver platform, said second multiserver platform and said third multiserver platform communicate via said central switch." (page 20).

The Examiner again notes that in figure 7 McGraw clearly shows first multiserver platform (top chassis), said second multiserver platform (middle chassis) and said third multiserver platform (bottom chassis) communicate via said central switch (middle link card/boad (middle switch). It is also noted that the claim simply requires a central (middle) switch that interconnects among

three platforms as taught by McGraw's invention. It is also noted that "central switch being not part of chassis as argued by the Appellant is not claimed. Claim 15, simply recites "wherein said first multiserver platform, said second multiserver platform and said third multiserver platform communicate via said central switch."

Lastly, the Appellant argues "McGraw's daisy chain configuration would be incapable of teaching three multiserver platforms communicating via a central switch" pages 18-20, see end of pragraph 2 of pages 19 and 20.

The Appellant has to look the reference of McGraw as whole and how different emobodiments in McGraw specification meets the claimed limitation. As discussed above, the central switch as claimed requires a central switch that couples one server platform to another via swicth blade and in the alternative to a third platform (claims 2 and 3). Appellant seems to bring the teachings of the specification into the claims. Nonetheless, the Examiner has shown how each dependent calim argued by the Appellant is met by McGraw's teaching. Furthermore, Appellant's argument that "McGraw's daisy chain configuration would be incapable of teaching three multiserver platforms communicating via a central switch" in not persuasive. As explained above, McGraw has shown the central switch connected with three different platforms as shown in figure 7. Furthermore, McGraw link card/board is capable of connecting multiple

separate platforms and acts as a bridge **"The link card** entity is **a bridge** between **multiple chassis** and is involved in **proxy of commands** on behalf of console server 50. This enables console server 50 to provide integrated console services across multiple chassis." (0128). Therefore, a bridge between multiple chassis indicates the central switch functionality capable of passing (communicating) messages between multiple multiserver platforms as indicated in McGraw (0128-0131; 0138 and figure 7). It is also noted that a "central switch"is not any part of a multiserver platform" (page 20 last paragraph) is not claimed.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

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